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i2 SUMMIT

DRUG-ELUTING STENTS VERSUS BARE METAL STENTS IN SAPHENOUS VEIN GRAFT LESIONS: A META-ANALYSIS OF 22 CLINICAL COMPARATIVE TRIALS

i2 Poster Contributions
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Authors: *Feng Zhang, Lili Dong, Junbo Ge, Shanghai Institute of Cardiovascular Diseases, Zhongshan Hospital, Fudan University, Shanghai, People's Republic of China*

Background: Drug-eluting stents (DESs) have been demonstrated to reduce the rate of restenosis and the need for repeat revascularization in de novo native coronary artery diseases. However, their clinical value in treating saphenous vein graft (SVG) lesions remains controversial. We therefore performed a meta-analysis based on all currently available clinical trials to compare DESs with bare metal stents (BMSs) for SVG intervention.

Methods: We searched MEDLINE, EMBASE, the Cochrane Central Register of Controlled Trials, and Internet sources for clinical studies comparing outcomes between DES and BMS among patients undergoing SVG intervention between January 2001 and September 2009. We extracted variables related to the study design, setting, participants, and clinical endpoints. Pooled estimates for odds ratios (OR) were computed according to random-effect methods.

Results: A total of 22 studies (2 randomized trials and 20 non-randomized comparisons) were included in this meta-analysis, involving 4,516 patients (2060 in the DES group and 2456 in the BMS group) undergoing percutaneous coronary intervention (PCI) of SVG lesions. All patients were followed up for a mean of 6-35 months. Compared to the BMS, DES significantly reduced all-cause mortality (8.3% vs 12.9%; OR 0.66, 95% confidence interval [CI] 0.51 to 0.88; $p = 0.004$) and target vessel revascularization (TVR) (13.2% vs 19.4%; OR 0.58, 95% CI 0.43 to 0.77; $p < 0.001$). There were no significant differences between patients treated with DESs and those with BMSs with respect to the risk of non-fatal myocardial infarction (4.3% vs 5.8%; OR 0.77, 95% CI 0.51 to 1.16; $p = 0.21$) or stent thrombosis (6.0% vs 11.5%; OR 0.48, 95% CI 0.19 to 1.26; $p = 0.14$). The composite of all-cause death, myocardial infarction and TVR was significantly reduced in the DES group in comparison with the BMS group (20.0% vs 27.2%; OR 0.58, 95% CI 0.44 to 0.76; $p < 0.001$).

Conclusions: This meta-analysis of currently available data favored DESs for patients undergoing PCI of diseased SVGs. Results from large-scale randomized trials are still needed to definitely establish the role of DES implantation for SVG interventional treatment.